Special Issue

Novel Research on Geomechanics: Current Status and Future Challenges

Message from the Guest Editors

The escalating global demand for energy has driven the rapid development of large-scale infrastructures, where extreme environments such as deep sea, underground space, and outer space pose significant challenges for ensuring safe design, efficient operation, and long-term performance. Geomechanics is evolving rapidly, integrating advanced testing, numerical modeling, and monitoring techniques across multiple spatial and temporal scales to investigate the evolutionary behavior of geomaterials and structures, thereby enhancing our ability to understand and predict their responses in diverse engineering applications. The integration of advanced techniques—including laboratory testing, high-resolution monitoring, and computational modeling—becomes increasingly critical as the rising frequency and intensity of extreme climate events significantly amplify geohazard risks, such as landslides, slope failures, subsidence, and offshore instabilities.

We welcome scholars from around the world can share cutting-edge research and foster cross-disciplinary collaboration to advance geomechanics and promote sustainable, resilient engineering solutions.

Guest Editors

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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